

Theropogon pallidus, New to the Flora of Thailand

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Theropogon, a monotypic genus of Liliaceae known from the Himalayan range and its adjacent regions, was confirmed to exist also in northern Thailand. This new Thai locality becomes the new southeasternmost locality in the geographical range of the genus. The specimen from Thailand has some differences from *Theropogon* (*T. pallidus*) as presently known, but the overall difference seems not so great, and therefore I assign this specimen to the same species. This report contains morphological and other data on this specimen.

In his Numerical List, Wallich (1832) listed the name *Ophiopogon* ? *pallidus* Wall. for a plant from Nepal without any description. Kunth (1850) studied this plant and gave it a detailed description under the same name. Later, having studied this species, Maximowicz (1871) established the new genus *Theropogon*. This genus has been monotypic since its establishment comprising only one species, *T. pallidus* (Wall. ex Kunth) Maxim.

For the purpose of studying the genus *Ophiopogon* taxonomically, I have had a loan of some specimens of that genus from the Natural History Museum in Paris, and I found that it included a specimen which can be identified as *Theropogon* (Figs. 1 & 2). This specimen was formerly identified as *Ophiopogon* by the original collectors. However, in many respects the specimen accords well with the known characteristics of *Theropogon*. For example, this specimen has a superior ovary with 9 to 12 ovules in each loculus (Fig. 2B), filaments of nearly the same length as the anthers (Fig. 2A), and leaves with a prominent midrib beneath (Fig. 2A). Many of these characters differ

from *Ophiopogon*.

However, this specimen has some differences from *Theropogon* (*T. pallidus*), as presently known. First, it is relatively small in size as a whole. For example, its pedicels are only 3 to 4 mm long, equaling the shortest length ever recorded in this species (Noltie 1994), and its styles 2.1 to 2.6 mm long, being nearly half of the shortest length (4.3 mm: Noltie 1994) ever reported. Second, there exists a difference in the flower colour, as follows. Flowers of this specimen are white, and tepals have a pale yellow central line and yellow tip, according to the collector's record (cited below), while the flowers of *T. pallidus* so far reported are white or tinged pinkish or purplish (Baker 1875, Hooker 1875, 1894, Krause 1930, Hara 1971, Liang 1978, Utech 1979, Polunin and Stainton 1984, Chen 1987, Noltie 1994). In these respects, the plants of this specimen appear to be differentiated to some degree from *T. pallidus* so far known¹⁾. However, the overall deviation of this specimen seems not so great as to warrant establishing a new species. Therefore, I assign this specimen to *T. pallidus*, and the species is

hence regarded as having a broader range of variation than before.

As for the habitat of this specimen, it is noteworthy

that it was collected from a limestone peak. However, a general feature of the habitat and the altitude where this specimen was collected also coincide with the

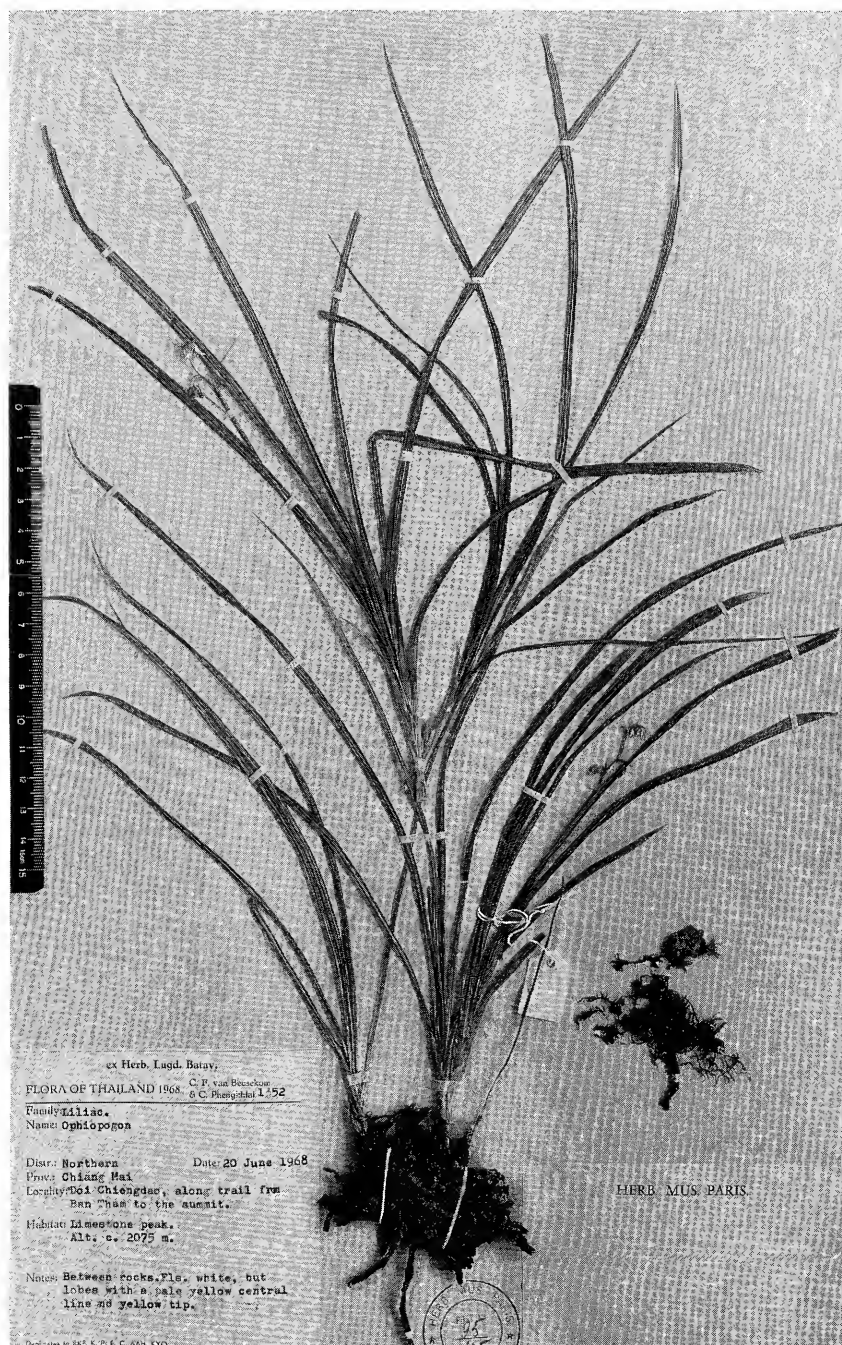


Fig. 1. A specimen identified as *T. pallidus* from Thailand.

previous records for *T. pallidus* (For example, Noltie (1994) reports that its habitat is dry rocky hillsides, and it is found at altitudes between 1830–3970 m).

Theropogon pallidus is known to exist in the Himalayan range and regions adjacent to it, including Uttar Pradesh (Kumaon), Nepal, Sikkim, Bhutan, Assam, Khasia, Tibet, and N. and N.W. of Yunnan (Maximowicz 1871, Baker 1875, Hooker 1875, 1894, Engler 1888, Krause 1930, Kitamura 1955, Hara et al. 1978, Liang 1978, Polunin and Stainton 1984, Wu 1984, Chen 1987, Noltie 1994). Whereas, a specimen here concerned was collected in northern Thailand. As far as I am aware, this report is the first to record the occurrence of *T. pallidus* in Thailand. This new locality in Thailand is faraway even from the nearest known locality (N.W. Yunnan) of *T. pallidus*, hence

isolated, and southernmost in its total range. There is a good possibility that in future this species will also be found in the regions between this new locality and the formerly known localities (For example, it may be found in Myanmar, etc.).

The habitat of this very interesting species in the southernmost, isolated locality in Thailand is important in various respects, and I hope it will not be lost in future due to human activities.

Theropogon pallidus (Wall. ex Kunth) Maxim., Bull. Acad. Imp. Sci. St.-Petersb. **15**: 90 (1871).

Ophiopogon ? pallidus [Wall., Numer. List: 179, n.5138 (1832), nom. nud.] ex Kunth, Enum. Pl. **5**: 300 (1850).

Description based on the specimen from Thailand:

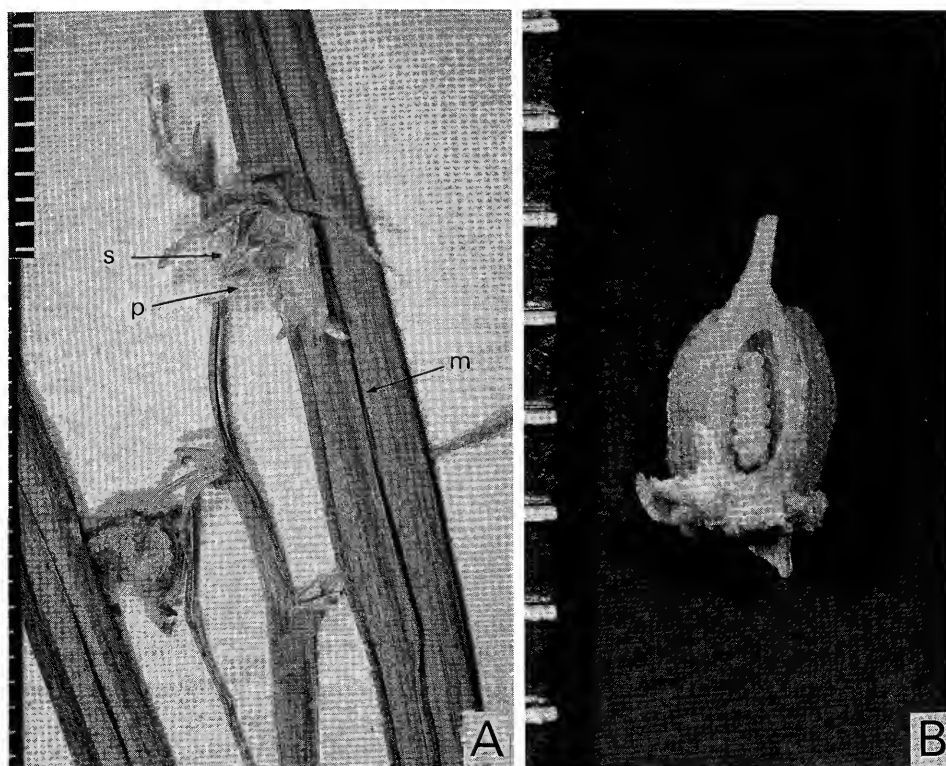


Fig. 2. Close-ups of some parts of the specimen in Fig. 1. A. An inflorescence and leaves. Stamen, pistil, and midrib are indicated by “s”, “p”, and “m”, respectively. B. Lower part of a pistil, showing an alignment of ovules in a loculus. The upper part of the style has been lost. Scale in mm.

Tufted herb. Totally glabrous. Rootstock thick and very short with many thick fibrous roots. Leaves linear, attenuated to the apex, sheathed at base, up to 27 cm long, 2.5–5.7 mm wide, midrib elevated beneath and prominent. Scape slender, compressed especially in upper part, angled and narrowly winged, 14.5–17 cm long. Inflorescence raceme, 1.7–1.8 cm long, 4-flowered. Flowers borne singly, subtended by both a bract and a bracteole. Pedicels curved downward, 3–4 mm long. Bracts lanceolate to narrowly lanceolate, with membranous margins, 0.35–2 cm long. Flowers campanulate, drooping. Tepals 6, free to base, imbricated, ovate, 5–6 mm long, 2.5–3 mm wide, 1-veined, slightly recurved outward in upper part. Stamens 6. Anthers lanceolate, minutely apiculate at apex, 2 mm long, introrse. Pollen grains pale yellow. Filaments c. 1.5 mm long, broad and flattened, c. 0.9 mm wide, base very shortly connate laterally between neighbouring filaments. Ovaries superior, subglobose with 3 longitudinal shallow grooves (i.e., trilobed in cross-section), 2 mm long, 3-locular. Ovules 9–12 in each loculus, arranged in 2 rows longitudinally on central marginal placenta. Style very slender, slightly attenuated, 2.1–2.6 mm long. Stigma very minute.

Specimen examined: Thailand, Chiang Mai, Doi Chiangdao. Limestone peak. Alt. c. 2075 m. Between rocks. Fls. white, but lobes with a pale yellow central line and yellow tip. 20 June 1968. C.F. van Beusekom & C. Phengkhilai, n.1352²⁾ (P, ex Herb. Lugd. Batav.).

I thank the curator of the National Museum of Natural History in Paris (P) for the loan of this specimen.

Endnotes

¹⁾A specimen here examined is one of those distributed from the herbarium in Leiden (L), Netherlands. This means that plural number of specimens with the same collection number were made from the same

habitat. Accordingly, a thorough examination of a set of these specimens may help considerably our understanding of the variation of this species at the locality.

²⁾Specimens with the same collection number kept at AAH, BKF, C, and L were identified by Charoenphol (1974) as *Ophiopogon malcolmsonii* Royle ex Hook. f. According to his paper, these specimens were collected in the same locality as the specimen here examined, but at a different altitude, 1200 m.

References

- Baker J. G. 1875. Revision of the Genera and Species of Asparagaceae. (*Theropogon*: p.562.) Journ. Linn. Soc., Bot. **14**: 508–632, pl. 17–20.
- Charoenphol C. C. 1974. Studies in Thai Liliaceae. Thai For. Bull., Bot. **8**: 88–94.
- Chen S.-C. 1987. *Theropogon* Maxim. p. 562, pl. 304 (1–2). In: Wu C.-Y. (ed.), Flora Xizangica. Vol. 5. Science Press, Beijing.
- Engler A. 1888. Liliaceae. p. 10–91. (*Theropogon*: p. 81). In: A. Engler und K. Prantl (ed.), Die Natürlichen Pflanzenfamilien **II** (5). Verlag v. Wilhelm Engelmann, Leipzig.
- Hara H. 1971. Liliaceae, p. 165–175. (*Theropogon*: p. 174). In: Hara H. (ed.), Flora of Eastern Himalaya. 2nd Report. Univ. of Tokyo Press, Tokyo.
- , Stern W. T. and Williams L. H. J. 1978. An Enumeration of the Flowering Plants of Nepal. Vol. 1. (*Theropogon* Maxim, p. 80.). British Museum, London.
- Hooker J. D. 1875. *Theropogon pallidus*. Curtis' Bot. Mag. **101**: t.6154.
- 1894. Flora of British India. Vol. 6. *Theropogon*: p. 324. L. Reeve, London.
- Krause K. 1930. Liliaceae, p. 227–386. (*Theropogon*: p. 370–371). In: A. Engler und K. Prantl (ed.), Die Natürlichen Pflanzenfamilien. **15a**. Verlag v. Wilhelm Engelmann, Leipzig.
- Kitamura S. 1955. Flowering Plants and Ferns. p. 73–290. (*Theropogon*: p. 96). In: Kihara H. (ed.), Fauna and Flora of Nepal Himalaya. Vol. I. Fauna and Flora Research Society. Kyoto Univ., Kyoto.
- Kunth C. S. 1850. Enumeratio Plantarum. Tomus 5. *Ophiopogon* ? *pallidus* Wall.: p. 300–301. Stutgardiae et Tubingae.
- Liang S.-Y. 1978. *Theropogon* Maxim.: p. 2 & pl. 1. In: Wang F.-T. et Tang T. (ed.), Liliaceae (2). Flora Reipublicae Popularis Sinicae 15. Science Press, Beijing.
- Maximowicz C. 1871. *Ophiopogonis* species in herbariis Petropolitanis. (*Theropogon* Maxim. p. 89–90.) Bull. Acad. Imp. Sci. St.-Petersb. **15**: 83–90.
- Noltie H. J. 1994. Flora of Bhutan. Vol. 3 (1). *Theropogon*: p. 192. Royal Botanic Garden Edinburgh, Edinburgh.
- Polunin O. and Stainton A. 1984. Flowers of the Himalaya. *Theropogon*: p. 428, pl. 123. Oxford Univ. Press, Oxford.
- Utech F. H. 1978. Floral vascular anatomy of the Himalayan *Theropogon pallidus* Maxim. (Liliaceae-Convallarieae). Annals of Carnegie Museum **48**: 25–41.

Wallich N. 1832. A numerical list of dried specimens in the East India Company's Museum. *Ophiopogon? pallidus* Wall.: p. 170, n. 5138. London.

Wu. C.-Y. 1984. Index Florae Yunnanensis. Tomus II. (*Theropogon*: p. 1939). The People's Publishing House, Yunnan, China.

田中教之: *Theropogon pallidus* タイに産す

ジャノヒゲ属 (*Ophiopogon*) の研究のためにパリの自然誌博物館から標本を借用していたが、その中の一点に、採集者によって *Ophiopogon* と同定されているが同属とは明らかに異なるものがあった。この標本は、多くの性質において *Theropogon pallidus* (ユリ科) と一致する。しかし、全体的に小形であり、花梗は長さ 3-4 mm で、花柱も長さ 2.1-2.6 mm しかない。また、採集者の記録によれば、花は白色であり、花被片の端部は黄色で、花被片の中央には淡黄色の筋があるという。これまで知られている *T. pallidus* の花色は、白色か、ピンクないし紫色を帯びる。このような点においてこの標本の個体は、これまで知られている *T. pallidus* とは僅かながら分化しているのかもしれない。しかし、仮にこれらの性質が原産地において安定しているものだとしても、その差異は種を分かつほど大きいものではないと判断する。生育地や海拔も既知のものともあまり変わりはない（ただし、この標本の産地は石灰岩地である）。現地

の多くの個体についてさらに詳しく研究する必要があるが、現時点においては、この標本は、*T. pallidus* であると同定する。

T. pallidus はこれまでヒマラヤとそれに続く山地、ないしはその近傍の山地に分布することが知られていたが、この標本の採集地はタイの北部であり、これまで知られているもっともそこに近い生育地（中国雲南省北西部）からもかなり離れている。タイにおける本種の分布はこれまで知られていないと思われるので、ここに報告することにした。この地が同種の分布域の南限となる。*Theropogon* 属は *T. pallidus* 一種からなる単型属である。その分類学的位置づけについては、今後の研究に委ねられるところが多い。この極めて興味深い種の、しかもその分布域の最東南部の隔離的分布地であるこのタイの生育地が、いつまでも無事であることを望みたい。

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